

REMARKS

In accordance with the foregoing, claim 10 is amended, and new claims 23-27 are presented. Claims 1-27 are pending and under consideration.

No new matter is presented in any of the foregoing and, accordingly, approval and entry of the amended and new claims are respectfully requested.

STATEMENT ON SUBSTANCE OF INTERVIEW

An Interview was conducted between the Examiner and the Applicant's representative on November 24, 2004. Applicant thanks the Examiner for the opportunity to conduct the interview.

During the interview aspects of the present invention that patentably distinguish over the cited art were discussed including that annular and cylindrical-shaped magnets as recited by independent claim 1 of the present invention, for example, are not taught by Houston (U.S.P. 4,853,630), and that Houston instead teaches a toriodal-shaped magnet, and thus Houston also does not teach "an annular magnet . . . having an inner circumference larger than an outer circumference of the cylindrical magnet."

It was also discussed that there is no "ergonomic" motivation to modify Houston to change the shapes of internal magnets.

Other arguments presented are included in the remarks that follow.

ITEM 3: REJECTION OF INDEPENDENT CLAIM 10 UNDER 35 U.S.C. §102(b) AS ANTICIPATED BY HOUSTON

The Examiner rejects claim 10 under 35 U.S.C. §102(b) as anticipated by Houston. (Action at pages 2-3).

In contrast to the cited art, claim 10, as amended recites a coordinates input apparatus including "a plurality of magnetoelectric transducers disposed in a plane transverse to the common central axis, positional symmetrically thereabout and relatively to the opposing lines of magnetic flux, and displaced radially from the pole of at least one of the first and second magnets; . . . wherein the magnetoelectric transducers are positioned outside a space defined between the first and second magnets."

Applicant submits these features are not taught by Houston. As discussed during the in-person interview, Houston does not teach magnetoelectric transducers positioned "outside a space defined between the first and second magnets."

Rather, Houston teaches (See, for example, FIG. 10a) Hall elements (magnetic sensors) on one magnet so as to detect changes in an electric field intensity. That is, the magnetic sensors are positioned within a space defined between the respective, spaced poles of two

magnets.

Conclusion

Since features recited by independent claim 10 are not taught by Houston, the rejection should be withdrawn and claim 10 allowed.

ITEM 5: REJECTION OF INDEPENDENT CLAIMS 1, 4 AND 7 (AND DEPENDENT CLAIMS 2-3, 5-6, 8-9, and 11-22) UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER HOUSTON

The Examiner rejects independent claims 1, 4, and 7 and dependent claims 2-3, 5-6, 8-9 and 11-22 under 35 U.S.C. §103(a) as being unpatentable over Houston. (Action at pages 3-9).

In contrast to the cited art, independent claims 1, 4, and 7, using independent claim 1 as an example recite a coordinate input apparatus including "a cylindrical magnet having a center axis; an annular magnet having a center axis in common with the center axis of the cylindrical magnet and having an inner circumference larger than an outer circumference of the cylindrical magnet; . . . the cylindrical magnet and the annular magnet are disposed so that respective, identical magnetic poles thereof are in opposing relationship, and the annular magnet is tiltable with respect to the cylindrical magnet and the plane of the magnetoelectric transducers, and the magnetoelectric transducers detect a change in a magnetic field caused by tilting of the annular magnet relatively to the cylindrical magnet."

Applicant submits that features recited by independent claims 1, 4, and 7 are not taught by Houston or obvious in view of Houston.

As discussed during the interview, Houston does not teach "a cylindrical magnet having a center axis; (and) an annular magnet having a center axis in common with the center axis."

Rather, Houston merely teaches (Fig. 9a) a toriodal, e.g., doughnut shaped magnet.

Further, as discussed during the interview, Houston does not teach "an annular magnet having a center axis in common with the center axis of the cylindrical magnet and having an inner circumference larger than an outer circumference of the cylindrical magnet."

Rather, Houston merely teaches (Fig. 9b) two magnets 48 and 49 with substantially the same inner circumferences, and one inner circumference not greater than the other circumference of the other.

Yet, further, Houston does not teach that a "cylindrical magnet and the annular magnet are disposed so that respective, identical magnetic poles thereof are in opposing relationship."

Further, features of the dependent claims are not taught by Houston. Dependent claim

11, for example, recites a coordinate input apparatus including a holder fixedly mounted with respect to one of the first and second magnets and having a curved interior surface symmetrically disposed with respect to the common center axes of the first and second magnets and surrounding both of the first and second magnets; and a slide support having an outer curved surface slidably engaging in mating relationship with the interior curved surface of the holder and supporting thereon the other of the first and second magnets; and the first and second magnets producing a force of repulsion therebetween, engaging the mating, outer curved surface of the slider support with the inner curved surface of the holder in a sliding relative relationship therebetween to afford rotation of the holder relatively to the slide support and tilting of the other of the first and second magnets with respect to the other of the first and second magnets."

As discussed during the interview, Houston does not teach such a "slide support."

In rejecting claim 11, the Examiner contends that a motivation for adjusting a shape of magnets is "to facilitate ergonomic characteristics." (Action at page 6). As discussed during the interview, Houston merely discusses (col. 4, lines 20-22) that a "spherical manipulator is also disclosed for use with any traditional joystick because of its improved ergonomic characteristics."

That is, Houston reference to "ergonomic" is regarding an external characteristic, i.e., a spherical manipulator versus a joystick. As discussed during the interview, Houston does not teach any motivation regarding an adjustment of internal shaping of magnets.

Conclusion

Since features recited by rejects independent claims 1, 4, and 7 and dependent claims 2-3, 5-6, 8-9 and 11-22 under 35 U.S.C. §103(a) as being unpatentable over Houston are not taught by Houston, the rejection should be withdrawn and claims 1-9 and 11-22 allowed.

NEW CLAIMS

New claims 23-27 present no new matter and are provided to afford a varying scope of protection.

New dependent claims 23-26, using claim 23 as an example recite that "each of the plurality of magnetoelectric transducers is mounted so as to be separated a distance from each of the cylindrical and annular magnets." (See, for example, FIGs. 14 and 16).

New claims 26 and 27 recite a coordinate input apparatus for designating a set of coordinates in three-dimensional space including "a first magnet and a second magnet having a common central axis and respective lines of magnetic flux in opposing relationship; and a plurality of magnetoelectric transducers disposed in a plane transverse to the common central

axis and each of the plurality of magnetoelectric transducers is fixedly mounted so as not to be in contact with the first magnet and the second magnet." (See, for example, FIGs. 14 and 16).

These, and other, features of claims 23-27 patentably distinguish over the cited art, and they are submitted to be allowable for the features recited therein.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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